



Natural Heritage &
Endangered Species
Program

Commonwealth of Massachusetts
Division of Fisheries & Wildlife
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MASSACHUSETTS PLANTS OF SPECIAL CONCERN

Crooked-stem Aster (*Aster prenanthoides* Muhl.)

GENERAL DESCRIPTION: Crooked-stem Aster is a 2-10 dm (0.5-3 ft.) tall, herbaceous perennial with zig-zagging stems and blue or pale purple flowerheads. This member of the Composite family (Asteraceae) is found in wet places, such as streambanks, meadows and moist woods.

AIDS TO IDENTIFICATION: Crooked-stem Aster is a colonial plant that arises from well-developed, creeping rhizomes. Stems are uniformly pubescent (hairy) under the flower heads and pubescent in lines below. The ovate to lanceolate, toothed leaves are alternate, 6-20 cm (2-8 in.) long and 1-5 cm (0.5-2 in.) wide. The lower third of the leaf is narrow and without teeth, but expands noticeably where it clasps the stem. Plants bloom from August through October, and each plant has several to many flower heads occurring in open, bracteate (leafy) clusters. The flower heads have 20-35 blue-violet rays that are 7-15 mm (0.25-0.5 in.) long. The achenes (dry, one seeded fruits) are strigose (with straight, appressed hairs pointing in the same direction).

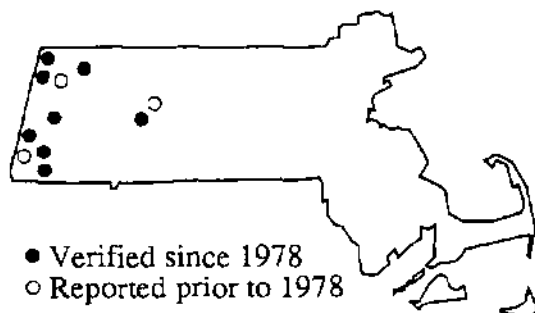
SIMILAR SPECIES: Bristly Aster (*A. puniceus*) has clasping leaves and blue or purple flowers, but its stems are stout, reddish and hairy and the plants are generally taller (up to 2.5 m or 8 ft.). Leaves of the similar Smooth Aster (*A. laevis*) are not abruptly contracted below as in *A. prenanthoides*.



Gleason, H.A. The New Britton and Brown Illustrated Flora of the US & Adjacent Canada. NY Botanical Garden, 1952.



Distribution Map of
Crooked-stem Aster



Distribution in Massachusetts

RANGE: The documented range of Crooked-stem Aster extends from New York to eastern Illinois, south to Washington, D.C., Kentucky, Iowa and the mountains of North Carolina and Tennessee. Disjunct populations occur in Minnesota, Wisconsin and Iowa.

HABITAT AND ASSOCIATED SPECIES: In Massachusetts, Crooked-stem Aster occurs on exposed gravels and cobbles and rich alluvial soil along river floodplains, in streamside seeps and partially wooded swamps, and along open and semi-open roadsides. In floodplain forests, Crooked-stem Aster is most common on riverbanks at the edge of open woods with willow (*Salix* sp.), shrubby dogwoods (*Cornus* sp.), zigzag goldenrod (*Solidago flexicaulis*), northern horse-balm (*Collinsonia canadensis*), lopseed (*Phryma leptostachya*), purple-stemmed aster (*Aster puniceus* var. *puniceus*) and Schreber's aster (*Aster schreberi*). Associated canopy dominants include sugar maple (*Acer saccharum*) white ash (*Fraxinus americana*) and American elm (*Ulmus americana*). In streamside seepage areas, Crooked-stem Aster is found with highbush cranberry (*Viburnum trilobum*), yellow touch-me-not (*Impatiens pallida*), common scouring rush (*Equisetum hyemale*), and various sedges, including *Carex bromoides*, *C. scabrata*, and *C. hystericina*.

POPULATION STATUS IN MASSACHUSETTS: Crooked-stem Aster is presently listed as a species of Special Concern in Massachusetts. As with all species listed in Massachusetts, individuals of the species are protected from take (picking, collecting, killing...) and sale under the Massachusetts Endangered Species Act. Twelve current stations and four historical stations (unverified since 1978) are known in the Commonwealth. All but one of the current stations occur in Berkshire County along the Housatonic, Hoosic and the Green Rivers of Great Barrington and Williamstown where Crooked-stem Aster is at the eastern edge of its range. Crooked-stem Aster is listed as rare in Connecticut and Canada and endangered in New Jersey.

MANAGEMENT RECOMMENDATIONS: As for many rare species, exact needs for management of Crooked-stem Aster are not known. The following comments are based primarily on observations of populations in Massachusetts. Crooked-stem Aster grows best in semi-open to open low, wet places such as streamsides and riverbanks. Any disturbance of the particular moisture regime or habitat would negatively impact the plants: seepage areas should be maintained and ground water levels neither raised nor lowered.

JK-1997